

Russian Samples

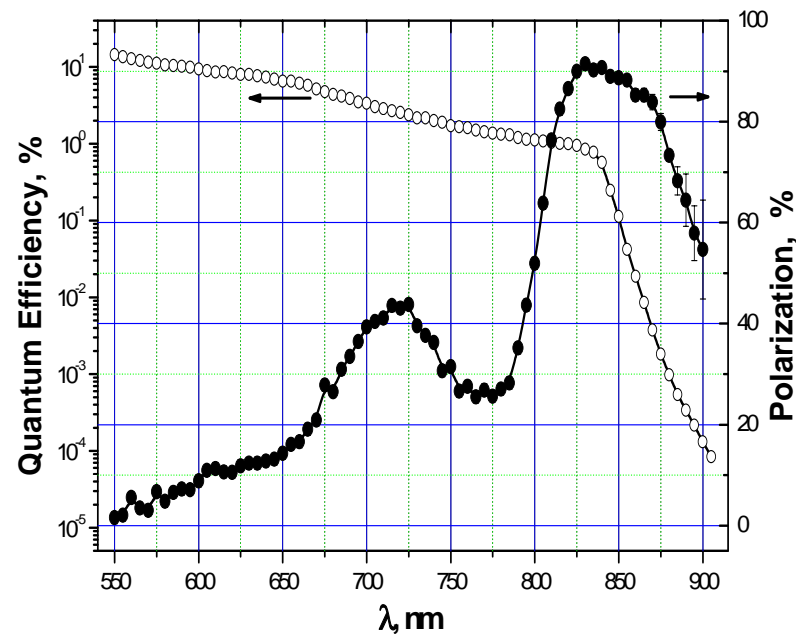
- Two wafers were grown at Ioffe on June 5. Both wafers had an As cap.
- Wafers were hand-carried to Zurich, and FedExed to SLAC on June 11.
- Wafers were delivered to SLAC on June 12.
- One sample from the first wafer was measured in CTS on June 14.
- One sample from the second wafer was measured in CTS on June 19.

Duplicate of Superlattice 7-307

SFbSPU data, November 28, 2006
AlInGaAs/AlGaAs Superlattice 7-307, Room temperature

- Structure

- GaAs cap 6 nm Be: 7×10^{18}
- $\text{Al}_{0.39}\text{Ga}_{0.61}\text{As}$ 2.1 nm
- $\text{In}_{0.2}\text{Al}_{0.2}\text{Ga}_{0.6}\text{As}$ 5.4 nm
 - Repeat x12 Be: 3×10^{17}
- $\text{Al}_{0.35}\text{Ga}_{0.65}\text{As}$ 0.3 μm
- GaAs buffer 0.2 μm
- 2" n-type GaAs substrate

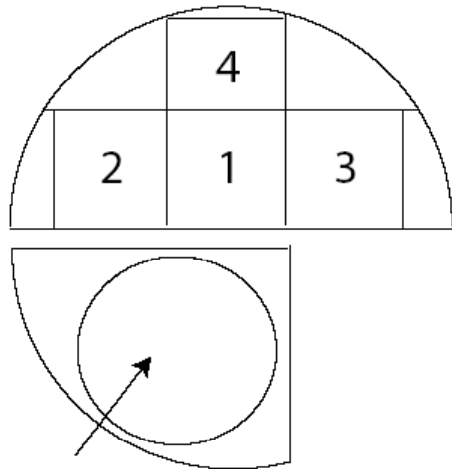


$P_{\text{max}} \sim 91.5\% @ 830 \text{ nm}$

$QE \sim 0.85\%$

As cap enabled heat-cleaning at 450° C.

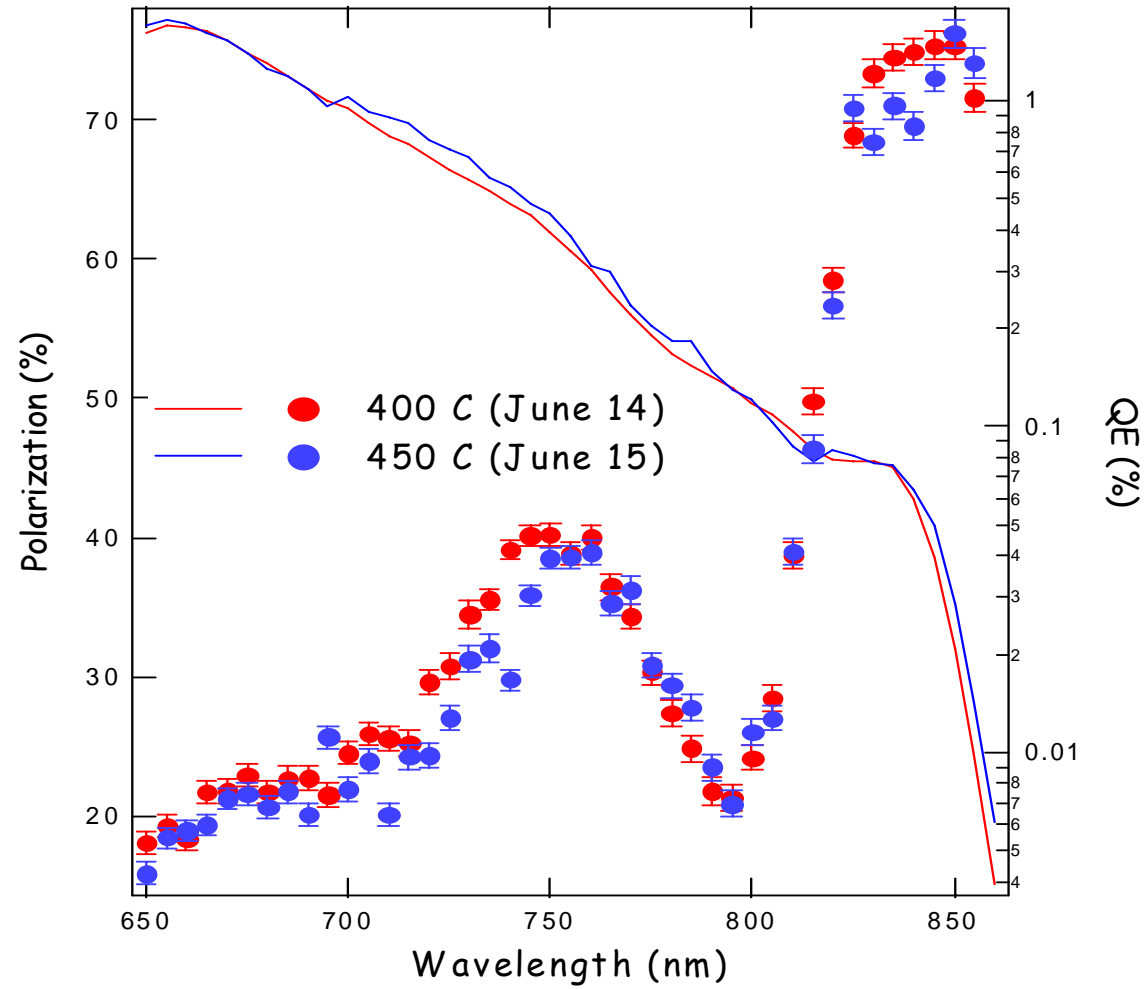
CTS measurements



SLC size cathode for
charge limit measurement

- 7-482
 - Sample #1
 - No chem cleaning
 - Heat-cleaned at 400° C
 - Normal cesiation speed
 - Heat-cleaned at 450° C
 - Fast cesiation
- 7-483
 - Sample #1
 - No chem cleaning
 - Heat-cleaned at 400° C

7-482



7-483

